

DOCUMENT RESUME

ED 191 485

IR 008 741

AUTHOR Stone, Sandra Kaye; Turner, Philip M.
TITLE Factors Related to the Requiring and Availability of Instructional Design Competencies and the Programs of Library Schools in the Southeast.
PUB DATE Jun 80
NOTE 29p.
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Competence: Higher Education: *Instructional Development: *Library Education: Library Schools: Library Science: Masters Degrees: *Masters Programs: *Media Specialists

ABSTRACT

This study investigates the relationship between nine selected library school characteristics and the offering or requiring of 13 identified instructional design competencies for master's level school library media program students. Responses to a questionnaire sent to 43 library schools indicate that none of the selected characteristics were significantly related to the requiring of a formal course in instructional design; however, three were significantly related to course availability. Additional information identifies a correlation between the respondent's attitudes and the location or requirement of instructional design competencies. Lack of success in finding related factors demonstrates the need for further research. Appendices include an instructional design components inventory and 13 references. (Author/RAA)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

ED191485

FACTORS RELATED TO THE REQUIRING AND
AVAILABILITY OF INSTRUCTIONAL
DESIGN COMPETENCIES AND THE
PROGRAMS OF LIBRARY SCHOOLS
IN THE SOUTHEAST

By
SANDRA KAYE STONE
And
PHILIP M. TURNER

June 1980

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Philip M. Turner

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Sandra Kaye Stone is a graduate student in the Educational Specialist Program at the Graduate School of Library Service, University of Alabama.

Philip M. Turner is an Assistant Professor, Graduate School of Library Service, University of Alabama

Please send all correspondence to:

Dr. Philip Turner
Graduate School of Library Service
P. O. Box 6242
University, AL 35468

TABLE OF CONTENTS

ABSTRACT	ii
LIST OF TABLES	iii
INTRODUCTION	1
THE PROBLEM	3
Purposes of the Study	3
Assumptions and Limitations	4
METHODOLOGY	4
Population	4
Instrument	4
Procedures	5
Analysis of the Data	5
RESULTS AND ANALYSES	6
CONCLUSIONS AND RECOMMENDATIONS	13
Recommendations for Further Study	15
APPENDIX	19
REFERENCES	22

ABSTRACT

The purpose of this study was to investigate the relationship between selected library school characteristics and the offering/requiring of instructional design competencies for master's level school library/media program students. The population consisted of the administrator or designate at each of the 43 library schools in the Southeast. Attitudinal variables were also investigated. None of the characteristics were significantly related to the requiring of a formal course in instructional design. Three of the variables were significantly related to the availability of instructional design courses within the library school. The respondent's attitude toward the inclusion of instructional design competencies was significantly related to the location/requirement of the competency. Further research on factors related to requiring instructional design for school library/media majors at the master's level is called for.

LIST OF TABLES

1.	Characteristics of Offerings of Instructional Design Courses	6
2.	Instructional Design Competencies Required/ Available	7
3.	The Location and Requirement of Instructional Design Courses and Selected Library School Characteristics	9
4.	Location of Instructional Design Courses	11
5.	Location of Instructional Design Courses and Percentage of Enrollment of School Library/Media Students	12
6.	Correlation Between Perceived Importance of Instructional Design and Location at Each Institution	13

INTRODUCTION

The role of the school library/media specialist was predicted to evolve from one of information service to one incorporating building-wide instructional leadership,¹ a role formalized for the media professional in 1975 by the American Library Association and the Association for Educational Communications and Technology.² A systematic approach to instructional leadership necessitates the performance of the instructional design function, that is, ". . . the process of selecting, planning, and using instructional strategies and media based on instructional objectives."³ This study was undertaken to determine whether the library schools in the southeastern United States included instructional design components in their curricula. A further purpose was to investigate the relationship between various factors and this inclusion.

As early as 1972, the Carnegie Commission on Higher Education reported the occurrence of a fourth revolution in education--the development in electronics and its application to instructional purposes. The report also suggested that the responsibility for implementing and nurturing this revolution would fall upon the learning resource center at all educational levels.⁴ The impact of this revolution on the school

coupled with the deterioration of instructional leadership roles by principals and teachers has had far-reaching effects on the traditional role of the school library/media specialist. The information service role is now expanding to include building-wide instructional leadership⁵ as Jetter's Delphi Study predicted in 1972.⁶

As the media professional responded to this changing role as an instructional developer, many adopted a systematic approach to teaching and learning that included an instructional design function defined by Chisolm and Ely as the ". . . process of selecting, planning, and using instructional strategies and media based on instructional objectives."⁷ The application of the systems approach to learning generated formal instructional development models (Gerlach and Ely, 1971, Childs, 1973, Thiagarajan, 1974 and Ledford and Cobun, 1975)⁸ which incorporated the instructional design function.

In 1975 the joint publication of Media Programs: District and School by the American Library Association and the Association for Educational Communications and Technology formalized the design function as a basic role of the media professional.⁹ This role is amplified by current textbooks used in the preparation of school library/media specialists (Prostano and Prostano, 1977 and Davies, 1979).¹⁰

The relatively recent incorporation of this role for the media professional has precluded detailed research into its performance by the K-12 media professional, but Turner and Martin's 1979 study indicated a positive relationship between

competency in the design function and the amount of performance.¹¹ The question then arises as to whether the training of school library/media specialists includes those components that lead to the acquisition of competencies in instructional design.

THE PROBLEM

Prior analyses of library school curricula have not concentrated on an aspect as specific as instructional design, but have dealt with library education generally or with larger segments such as the instructional technology survey by Prostan and Prostan in 1979¹² or the intellectual freedom and censorship survey conducted by Shuman and the American Library Association's Office for Intellectual Freedom in 1976.¹³ Both of these studies were limited to schools accredited by the American Library Association. A general study was also completed by Johnson in 1978 of graduate programs in educational technology.¹⁴

Purposes of the Study

The purposes of the study were:

1. to determine the relationship between selected library school characteristics and the location and level of requirement of instructional design coursework at library schools in the southeastern United States and
2. to determine the relationship between the perceived importance of instructional design and the location and level of requirement of instructional design coursework at library schools in the southeastern United States.

Assumptions and Limitations

The assumption was made that the reports of the library school respondents were valid and accurate.

The study was limited to 43 library schools listed in the American Library Directory¹⁵ belonging to the region defined as the Southeast by the American Library Association. The states of this region are: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

METHODOLOGY

Population

The population used in this study consisted of the administrator of 43 library schools in the Southeast.

Instrument

A questionnaire was developed by the researchers which collected data on the location of instruction of 13 instructional design competencies. These competencies were drawn from several instructional design models.¹⁶ The respondent was also requested to indicate the perceived importance of the inclusion of each competency in preparing school library/media specialists. The same procedure was followed to collect information regarding a formal course in instructional design. In addition the questionnaire collected descriptive data for each library school. The instrument was tested with a pilot group consisting of library school faculty and revised on the basis of the responses received. (See appendix for questionnaire.)

Procedures

A packet containing an instrument, a stamped return envelope, and a cover letter was sent to the administrator of each library school. A second issue of questionnaires was sent after two weeks. A follow-up postcard was sent four weeks after the initial mailing.

Analysis of the Data

Descriptive statistics generated by the questionnaires were tabulated for the following variables:

1. Type of terminal degree held by the library school administrator
2. Number of faculty members (FTE) employed by the library school
3. Location of the library school within a department of education
4. Accreditation of the library school by the American Library Association
5. Percentage of the total library school enrollment of students in the school library/media master's program
6. Location of formal instructional design course(s)
7. Requirement of a formal instructional design course for school library/media master's students
8. Frequency of the requiring of each of 13 instructional design competencies
9. Location of courses which included each variable

10. Perceived importance of the inclusion of a formal course in instructional design in the education of school library/media specialists.

Relationships between the requiring of a formal instructional design course for school library/media specialists and the following variables were investigated through the use of chi-square tests of independence:¹⁷

1. Number of faculty (FTE) employed by the library school
2. Type of terminal degree held by the library school administrator
3. Location of the library school within a department of education
4. Accreditation of the library school by the American Library Association
5. Percentage of the total library school student enrollment of students in the school library/media master's program.

The Yates' Correction was applied where appropriate.¹⁸

The relationship between the location of the instructional design course and the same variables were investigated through the use of chi-square tests of independence.

An additional relationship was investigated between the perceived importance of the inclusion of instructional design and accreditation of the library school by the American Library Association.

A final relationship between the perceived importance of the inclusion of the 13 instructional design competencies in the preparation program for school library/media specialists and the actual inclusion was investigated through the use of Pearson's Product-Moment Correlation Coefficient by treatment of the location data as interval data.¹⁹

RESULTS AND ANALYSES

Thirty-seven, or 86 percent, of the questionnaires were returned. The 37 questionnaires were completed to a varying degree and resulted in different numbers of the instrument being available for each analysis. Of the respondents, 29 reported that a course in instructional design was available somewhere at their institution. Nineteen indicated that the course was offered by the library school. Only 13 programs, however, required such a course, wherever located. (See Table 1.)

TABLE 1.
CHARACTERISTICS OF OFFERINGS OF
INSTRUCTIONAL DESIGN COURSES

	Yes	No	Total Number
Available at Institution	29	6	35
Located in Library School	19	16	35
Required for Library/ Media Master's Degree	13	20	33

TABLE 2
INSTRUCTIONAL DESIGN COMPETENCIES
REQUIRED/AVAILABLE

Competency	Number of Institutions Requiring	Number of Institutions Where Available
1. Identification of interim objectives	20	27
2. Identification of terminal objectives	21	29
3. Arrangement of objectives into a hierarchy	15	25
4. Identification of learning behaviors according to a prescribed taxonomy	15	27
5. Development of motivational activities	20	29
6. Validation of instructional materials	18	27
7. Performance of learner analysis according to an established model	12	28
8. Performance of classroom level needs assessment	19	31
9. Assessment of entry level behaviors	17	28
10. Design of criterion tests	16	27
11. Design of instructional messages	19	29
12. Utilization of formative test results for instructional plan revision	15	28
13. Facilitation of instructional designer/client relationships	19	25

Focussing on the individual competencies, an average of 6.94 were included in required courses by the institutions responding. Seven of the programs required courses which collectively contained all 13 competencies. None of the competencies were included in required courses at 11 reporting institutions. (See Table 2.)

As can be seen in Table 2, competencies concerning instructional objectives, considered by many to be the foundation of instructional design, were required most often. These competencies along with two "teaching activity" competencies, were also among the most available. The three competencies required least often are generally considered as somewhat esoteric.

The respondents were also asked to indicate perceived importance of the inclusion of instructional design in the preparation of a school library/media specialist at the master's level. Twenty respondents indicated that the inclusion was very important, four felt that it was moderately important, four were neutral, four indicated that it was less important, and one stated that instructional design had little or no importance in the curriculum.

The five factors analyzed as to their relationship to the requirement of instructional design courses were: the number of faculty (FTE) employed by the library school, the type of terminal degree held by the library school administrator, the accreditation of the library school by the American Library Association, the percentage of the total enrollment of students (FTE) in the school library/media master's program,

and the location of the library school within a department of education. None of the five variables yielded a significant difference. (See Table 3.)

TABLE 3

THE LOCATION AND REQUIREMENT OF INSTRUCTIONAL
DESIGN COURSES AND SELECTED LIBRARY
SCHOOL CHARACTERISTICS

Library School Characteristics	
1.	Number of faculty (FTE) employed by the library school
2.	Type of terminal degree held by the library school administrator
3.	Accreditation of the library school by the American Library Association*
4.	Percentage of the total enrollment of students (FTE) in the school library/media master's program*
5.	Location of the library school within a department of education*

*Related significantly ($p \leq .01$) to the location of instructional design courses

**Related significantly ($p \leq .01$) to the requirement of instructional design courses

The same five factors were compared with the location of instructional design courses. (See Table 3.) No significant difference was found between the location of the courses and the number of faculty (FTE) members employed by the library school or the terminal degree possessed by the library school administrator. The three factors which did

yield a significant difference at the $p < .01$ level were the accreditation of the library school by the American Library association, the location of the library school within a department of education, and the percentage of the total enrollment of students (FTE) in the school library/media master's program. (See Table 4.)

As can be seen from Table 4 the significant difference ($\chi^2 = 10.47$, $p < .01$) between accredited and non-accredited schools in regard to the location of the instructional design course was generated by the tendency of instructional design courses to be offered within non-accredited schools and outside of accredited schools. Only two of the schools accredited by the American Library Association offered a formal instructional design course within the library school.

A significant difference ($\chi^2 = 7.95$, $p < .01$) between the library schools located within a department of education and those not so located in regard to the offering of a formal course in instructional design within the library school was found as Table 4 indicates. Fifteen library schools located within a department of education provided instructional design within the school, while only four schools outside of a department of education offered instructional design for its students.

Table 5 summarized the significant difference ($\chi^2 = 10.38$, $p < .01$) found between library school dichotomized about the mean percentage of school/library media students in regard to the location of courses in instructional design. This difference was generated by the availability of instructional

TABLE 4
LOCATION OF INSTRUCTIONAL
DESIGN COURSES

Accreditation Status of Library School		
	Accredited	Non-Accredited
Availability Within Library School	2	17
Availability Outside Library School or Not Available	10	6
	12	23
		35

df 2
 $\chi^2 = 10.47$
 $p < .01$

Department of Education Status		
	Within a Dept.	Outside a Dept.
Availability Within Library School	15	4
Availability Outside Library School or Not Available	5	11
	20	15
		35

df 2
 $\chi^2 = 7.95$
 $p < .01$

design within 14 library schools whose percentage of school library/media students were above the mean percentage of all schools as compared with only four schools with a student enrollment percentage below the mean which offered instructional design within the school.

TABLE 5
LOCATION OF INSTRUCTIONAL DESIGN COURSES
AND PERCENTAGE OF ENROLLMENT OF
SCHOOL LIBRARY/MEDIA STUDENTS

	Number of Schools with Percentage Of Students Above Mean	Number of Schools with Percentage Of Students Below Mean	
Availability Within Library School	14	4	18
Availability Outside Library School or Not Available	3	12	15
	17	16	33

df 2
 $\chi^2 = 10.38$
 $p < .01$

Data were collected from each institution regarding the perceived important of instructional design in the preparation of school/library media specialists. No significant difference between accredited and non-accredited library school apropos of this variable was found.

Questionnaires were complete enough from thirty-four institutions to generate a total score for the perceived importance of the 13 instructional design competencies. Another score was generated for the location of the instructional design course at the institution. When the two scores were compared, a positive and significant relationship ($p < .001$) was found. (See Table 6.)

TABLE 6
CORRELATION BETWEEN PERCEIVED IMPORTANCE
OF INSTRUCTIONAL DESIGN AND LOCATION
AT EACH INSTITUTION

	N	X	Range	S.D.	
Total Importance Score	34	42.18	44	10.15	
Total Location Score	34	33.15	46	15.55	.57*

* $p < .001$

CONCLUSIONS

A conclusion that can be drawn from the data is that instructional design has generally been integrated into the curriculum in an all or nothing fashion, with over half of the institutions either requiring all of the competencies or none of the competencies. Instructional design can be viewed as a unitary innovation in terms its infusion into the curricula of the library schools of the Southeast.

The availability of competencies, when not required, may be of less significance than it would appear at first glance. With

the increasing complexity of certification requirements, the likelihood of a student taking an elective course including these competencies is diminishing. When one considers that, because of reciprocity of certification among states, the graduates of most programs will be eligible for essentially the same type of certification, it becomes necessary for the principals who are doing the hiring to look beyond certification to course content.

While the study did not yield any significant data to explain the infusion of instructional design wholly into some library schools and little or none into others, it did eliminate some seemingly obvious factors. These included accreditation by the American Library Association, size of the library school faculty, and the percentage of the student body enrolled as school library majors.

Greater success was found in relating factors to the availability of instructional design courses within the library school. A profile of a library school which offers a course in instructional design would include its being subsumed by a department of education, lack of accreditation by the American Library Association, and a greater than average percentage of students enrolled in the school library/media specialist program.

The presence of both accreditation and department of education factors is not surprising as a significant proportion of schools accredited by the American Library Association were not within a school of education ($\chi^2 = 7.30, p < .01$).

Based upon the data collected in this study, it can be inferred that the administrator's attitude toward the inclusion of instructional design competencies in required courses is related to where and whether the competencies are required. This correlation should not be surprising as the administrator often strongly influences the location and requirement of courses.

Recommendations for Further Study

The need for further study is obvious from the lack of success of this study in finding related factors to the requirement of a formal course in instructional design. Perhaps the explanation can be discovered through a study of a combination of variables including financial and philosophical information. A more sophisticated and in-depth data collection and analysis is required.

The seeming dichotomization of library schools by those that do or do not require instructional design competencies calls for further study. Whether this decision is based upon philosophical tenets or reflects financial constraints would be of special interest.

For those who feel that the library/media specialist should include instructional design activities in their performance, the results show promise. There is a large majority of institutions that are providing and often requiring core competencies in instructional design. Since the possession of competencies in instructional design has been strongly correlated with the performance of these activities at the K-12

level,²⁰ we may look for the practice of instructional design to flourish at this level.

For those advocates of the proactive school library/media specialist, conclusions of this study point to a course of action. Library school administrators could be provided with information about the potential role of the school library/media specialist. Perhaps a follow-up study will reveal a transition to a majority of Southeastern library schools requiring courses including all of the instructional design competencies.

APPENDIX

**INSTRUCTIONAL DESIGN
COMPONENTS INVENTORY**

INSTRUCTIONAL DESIGN COMPONENTS INVENTORY

The purpose of this study is to determine the extent to which students in school library/media specialist preparation programs are introduced to concepts that could be grouped under the term "instructional design". An additional purpose is to establish the factors which might relate to the presence or absence of these concepts in the library school curriculum.

DIRECTIONS: Please read each of the following questions and mark the most appropriate response.

I.

1. What type of terminal degree does the library school administrator hold? (Please check one)
☐ D.L.S. ☐ M.L.S.
☐ Ed.D. ☐ Sixth Year
☐ Ph.D. ☐ Other _____
2. What is the name of the institution which granted the degree above?

3. How many years of library experience does the library school administrator possess in each of these categories?
☐ Academic ☐ Public
☐ School ☐ Special
☐ Other _____
4. Please indicate the type and number of terminal degrees possessed by the library school faculty.
☐ D.L.S. ☐ M.L.S.
☐ Ed.D. ☐ Sixth Year
☐ Ph.D. ☐ Other _____
5. How many faculty members (FTE) are employed by the library school?

6. Is the library school a department or division within a school of education?
☐ Yes ☐ No
7. If the library school is accredited by the American Library Association, in what year was accreditation first received?

8. What percentage of the total library school student enrollment (FTE) are in the school library/media master's program?

9. What is the average number of elective hours available to students in the school library/media master's program? _____

II.

Is a course in instructional design for master's candidates with SCHOOL LIBRARY/MEDIA specialization included:

(Please check one)

- _____ As a required course within the department
- _____ As a required course outside the department
- _____ As an elective course within the department
- _____ As an elective course outside the department
- _____ Not available at the institution

III.

Please indicate your perceived importance of the inclusion of the following instructional design components in the training of a SCHOOL LIBRARY/MEDIA SPECIALIST at the master's level.

Please indicate under which category the following instructional design components are made available to students in the SCHOOL LIBRARY/MEDIA preparation program at the master's level.

0 = Little or no importance

0 = Included in a required course taught within the department

1 = Less Important

1 = Included in a required course taught outside the department

2 = Neutral

2 = Included in an elective course taught within the department

3 = Moderately important

3 = Included in an elective course taught outside the department

4 = Very Important

4 = Not available at the institution

0 _ 1 _ 2 _ 3 _ 4 _	Identification of interim objectives	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Identification of terminal objectives	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Arrangement of objectives into a hierarchy	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Identification of learning behaviors according to a prescribed hierarchy	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Development of motivational activities	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Validation of instructional materials	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Performance of learner analysis according to an established model	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Performance of classroom level needs assessment	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Assessment of entry level behaviors	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Design of criterion tests	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Design of instructional messages	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Utilization of formative test results for instructional plan revision	0 _ 1 _ 2 _ 3 _ 4 _
0 _ 1 _ 2 _ 3 _ 4 _	Facilitation of instructional designer/client relationships	0 _ 1 _ 2 _ 3 _ 4 _

IV.

- Please indicate your perceived importance of the inclusion of instructional design in the training of a SCHOOL LIBRARY/MEDIA SPECIALIST at the master's level.

(Please check one)

☐ Very important

☐ Moderately important

☐ Neutral

☐ Less important

☐ Little or no importance
- If you feel an instructional design course should be required or encouraged for SCHOOL LIBRARY/MEDIA SPECIALISTS at the master's level and one is not available at your institution, please describe briefly the reasons which contribute to this unavailability.

¹¹Philip M. Turner and Nina N. Martin, Environmental and Personal Factors Affecting Instructional Development by the Media Professional at the K-12 Level (ERIC, January, 1979, ED 172 796).

¹²Joyce S. Prostan and Emanuel T. Prostan, "Technology Courses in Library Schools," Audiovisual Instruction, 24 (September, 1979): 38-39.

¹³Bruce A. Shuman, "Intellectual Freedom Courses in Graduate Library Schools," Journal of Education for Librarianship 18 (Fall, 1977): 99-109.

¹⁴Jenny K. Johnson, "A Survey of 69 Master's Programs in Educational Technology," Audiovisual Instruction, 24 (February, 1979): 43-45.

¹⁵American Library Directory, 32nd ed., 1979 (New York: R. R. Bowker, 1979) pp. 1523-9.

¹⁶Gerlach and Ely; Childs; Thiagarajan; Ledford and Cobun.

¹⁷N. M. Downie and R. W. Heath, Basic Statistical Methods, 4th ed. (New York: Harper & Row, 1974) pp. 189-195.

¹⁸Downie and Heath, pp. 196-199.

¹⁹Downie and Heath, pp. 89-95.

²⁰Turner and Martin.

REFERENCES

¹Michael De Bloois, "Psst, Have You Heard There Is a New Instructional Leader in the Schools?" International Journal of Instructional Media, 7 (No. 1, 1979-80) 1-7.

²American Library Association and the Association for Educational Communications and Technology, Media Programs: District and School (Chicago: American Library Association, 1975), pp. 4-9.

³Margaret E. Chisholm and Ronald P. Ely, Instructional Design and the Library Media Specialist, School Media Centers: Focus on Trends and Issues, No. 5 (Chicago: American Association of School Librarians and the American Library Association, 1979) p. 3.

⁴Carnegie Commission on Higher Education, The Fourth Revolution: Instructional Technology in Higher Education, (1972), (New York: McGraw-Hill, 1974).

⁵De Bloois.

⁶Margaret A. Jetter, The Roles of the School Media Specialist in the Future: a Delphi Study (Doctoral Dissertation, Michigan State University, 1972; Ann Arbor, Michigan: Xerox University Microfilms, no. 73-12373, 1973).

⁷Chisholm and Ely.

⁸Vernon S. Gerlach and Donald P. Ely, Teaching and Media: A Systematic Approach (Englewood Cliffs, New Jersey, 1971); John W. Childs, "A Set of Procedures for the Planning of Instruction," in Instructional Systems (Englewood Cliffs, New Jersey: Educational Technology Publications, 1973) pp. 1-7; Sivasailam Thiagarajan, "Interactive Teaching and Instructional Development: Emergence of a New Teaching Model," Audiovisual Instruction, 19 (No. 1, 1974) pp. 6-8; and Bruce E. Ledford and Ted C. Cobun, "Effective Learning/Design Analysis," in D. Z. Suleiman and P. J. Sleeman, eds., A Systems Approach to Learning Environments (Roselle, New Jersey: MEDED Projects, Inc., 1975) pp. 400-405.

⁹American Library Association.

¹⁰Emanuel T. Prostanio and Joyce S. Prostanio, The School Library Media Center, 2nd ed. (Littleton, Colorado: Libraries Unlimited, 1977) and Ruth Ann Davies, The School Library Media Program: Instructional Force for Excellence, 3rd ed. (New York: R. R. Bowker, 1979).